

REMARKS

In the Office Action mailed July 16, 2002, claims 1 and 3-4 were rejected under 35 USC §102(e) as being anticipated by Ishikawa et al. (U.S. Patent No. 5,818,970), claim 2 was rejected under 35 USC §103(a) as being unpatentable over Ishikawa et al., and claims 5-16 were rejected under 35 USC §103(a) as being unpatentable over Ishikawa et al. in view of Greenberg (U.S. Patent No. 4,357,624). The foregoing rejections are respectfully traversed.

In response to the subject Action, claims 1-8 and 10-16 are amended. New claims 17-22 are added. Care has been exercised to avoid the introduction of new matter.

Claims 1-22 are pending in the present application; claims 1-5, 8, 11-12, 14, 16, and 17 are independent claims. Claims 6 and 7 depend from claim 5; claims 9 and 10 depend from claim 8; claim 13 depends from claim 12; claim 15 depends from claim 14; and claims 18-22 depend, either directly or indirectly, from claim 17.

Claims 1-8 and 10-16 are amended for clarification, which amendments are unrelated to patentability. A Version with Markings to Show Changes Made to the claims is included herewith.

The present invention is directed to applying a display effect such as shading and mosaic to a moving digital image, dynamically and in real time. The present invention includes an encoder, as shown in Figure 1 and disclosed on pages 9-11 of the present specification. As shown in Figure 1, the encoder 10 of the present invention includes an area information input unit 12, an additional information encoding unit 13, a digital moving image source input unit 11, a digital moving image stream encoding unit 14, and a multiplexing unit 15.

The present invention also includes a decoder. One embodiment of the decoder of the present invention is shown in Figure 2 and disclosed on pages 11 and 12 of the present specification. The decoder 20 shown in Figure 2 includes a data changing unit 24 and changes data for a pixel. Another embodiment of a decoder of the present invention is shown in Figure 3. As shown in Figure 3, the decoder 20 also includes an instructing unit 25. The instructing unit 25 detects a user input or an event and sends a signal instructing the data changing unit 24 how to change data. In the present invention, through the data changing unit 24 and the

instructing unit 25, pixel data is easily changed.

Ishikawa discloses an image encoding apparatus, as shown in Figure 1 of Ishikawa, which receives a multi-value image 101 by an input terminal 102 and provides the multi-value image data to both a character/line image extraction unit 103 and a delay unit 104. The buffer 102 stores the multi-value image, and the multi-value image is subsequently read out from the terminal 102 in blocks, which are input to both the image extraction unit 103 and the delay unit 104. The character/line image extraction unit 103 then extracts the most frequent value in a block as color information of a character/line image (refer to col. 6, at lines 3-5 of Ishikawa). In the Ishikawa apparatus, the received multi-value image remains together, and is not separated.

Greenberg discloses an interactive video production system processing two different digitized composite color images to produce a displayable resultant composite image.

The combination of Ishikawa and Greenberg is an image encoding apparatus which receives a multi-value image, including digitized composite color images, in which the multi-value image is input together and remains together, without being separated.

In contrast to the foregoing references relied upon, each of independent claims 1-5, 8, 11-12, 14, 16, and 17 of the present application recites (using the recitation of claim 1 as an example) "inputting moving image data" and "inputting control information" for the moving image data.

That is, in the present invention, the "image data" and the "control information" are input separately from each other.

In addition, each of the foregoing independent claims also recites various additional, patentably distinguishing features of the present invention. Each of claims 1, 2, 3, 4, and 17 recites (using the recitation of claim 1 as an example) "integrating" the "image data" and the "control information". Moreover, each of claims 5, 11, 12, and 13 recites (using the recitation of claim 5 as an example) "executing data change designated by the control information to a moving image data stream". In addition, claim 8 recites "executing the processing designated by the control information to a moving image data stream".

Further, the foregoing dependent claims recite patentably distinguishing features of their own. For example, claim 6 recites "said data changing unit executes the data change while said moving image data stream is reproduced".

Neither Ishikawa nor Greenberg, either alone or in combination, discloses or suggests the foregoing features of the present invention.

Withdrawal of the foregoing rejections, and allowance of new claims 17-22, is respectfully requested.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

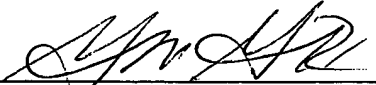
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please AMEND the following claims:

1. (ONCE AMENDED) A moving image data controlling apparatus comprising:
a moving image source input unit [for] inputting moving image data;
an information input unit [for] inputting control information designating a processing for the moving image data inputted through said moving image source input unit; and
a data integrating unit [for] integrating the moving image data inputted through said moving image source input unit with the control information inputted through said information input unit.
2. (ONCE AMENDED) A moving image data controlling apparatus comprising:
a digital moving image source input unit [for] inputting digital moving image data [containing] comprising plural data of a predetermined image unit;
an area information input unit [for] inputting area information defined for each predetermined image unit of the digital moving image data inputted through said moving image source input unit; and
a data integrating unit [means for] integrating the area information inputted through said area information input unit, as additional information for all pixels in each predetermined image unit of the digital moving image data inputted through said digital moving image source input unit, with the digital moving image data.
3. (ONCE AMENDED) A moving image data storing method comprising:
[a step of] inputting moving image data;
[a step of] inputting control information designating a processing for the inputted moving image data;
[a step of] integrating the inputted moving image data with the control information; and
[a step of] storing the moving image data and the control information which are integrated.
4. (ONCE AMENDED) A computer readable medium storing a program which when executed by a computer causes the computer to execute the operations comprising:

[making computer function as;]

[moving image source input step for] inputting moving image data;

[information input step for] inputting control information designating a processing for the inputted moving image data [inputted through said moving image source input step]; and

[data integrating step for] integrating the inputted moving image data [inputted through said moving image source input step] with the inputted control information [inputted through said information input step].

5. (ONCE AMENDED) A moving image data controlling apparatus comprising:
a moving image source input unit [for] inputting moving image data;
an information input unit [for] inputting control information designating [a] processing for the moving image data inputted through said moving image source input unit; and
a data changing unit [for] executing data change designated by the control information to a moving image data stream obtained from the moving image source input unit.

6. (AS ORIGINAL) A moving image data controlling apparatus according to Claim 5, wherein said data changing unit executes the data change while said moving image data stream is reproduced.

7. (ONCE AMENDED) A moving image data controlling apparatus according to Claim 5, further comprising:
an instructing unit [for] instructing said data changing unit whether [or not] the data change is executed and/or how to change data when the data change is executed in accordance with an input from [an] a user or from another event.

8. (ONCE AMENDED) A moving image data reproducing method comprising:
[a step of] inputting moving image data;
[a step of] inputting control information designating a processing for the moving image data; and
[a step of] executing the processing designated by the control information to a moving image data stream obtained from the inputted moving image data.

9. (AS ORIGINAL) A moving image data reproducing method according to Claim 8, wherein the data change is executed while said moving image data stream is reproduced.

10. (ONCE AMENDED) A moving image data reproducing method according to Claim 8, wherein an instruction from [an] a user or another event is inputted, and an existence of the data change and/or a [change] content change are decided in accordance with the inputted instructions or the inputted event.

11. (ONCE AMENDED) A computer readable medium storing a program which when executed by a computer causes the computer to execute the operations comprising:
[making computer function as;]

[moving image source input step for] inputting moving image data;

[information input step for] inputting control information designating [a] processing for the inputted moving image data [inputted through said moving image source input step]; and

[data changing step for] executing data change designated by the control information to a moving image data stream obtained from the inputted moving image data [obtained from the moving image source input step].

12. (ONCE AMENDED) A moving image data controlling apparatus comprising:
a digital moving image source input unit [for] inputting digital moving image data [containing] comprising plural data of a predetermined image unit;

an area information input unit [for] inputting area information defined for each predetermined image unit of the digital moving image data inputted through said moving image source input unit; and

a data changing unit [for] obtaining a digital moving image stream from the moving image source input unit and [for] executing data change to pixels of the digital moving image data designated by the control information in each predetermined image unit of the digital moving image stream.

13. (ONCE AMENDED) A moving image data controlling apparatus according to claim 12, further comprising:

an instructing unit [for] instructing said data changing unit whether [or not] a pixel value is changed and/or how to change the pixel value when the pixel value is changed.

14. (ONCE AMENDED) A moving image data controlling method comprising:

[a step of] inputting digital moving image data [containing] comprising plural data of a

predetermined image unit;

[a step of] inputting area information defined for each predetermined image unit of the inputted digital moving image data;

- [a step of] obtaining a digital moving image stream from the digital moving image data; and

[a step of] executing data change to pixels of the digital moving image data designated by the control information in each predetermined image unit of the digital moving image stream.

15. (ONCE AMENDED) A moving data controlling method according to claim 14, [wherein it is instructed whether or not] further comprising instructing whether a pixel value is changed and/or how to change the pixel value when the pixel value is changed.

16. (ONCE AMENDED) A computer readable medium storing a program [making a computer function as:] which when executed by a computer causes the computer to execute the operations comprising:

[digital moving image source input step for] inputting digital moving image data [containing] comprising plural data of a predetermined image unit;

[area information input step for] inputting area information defined for each predetermined image unit of the inputted digital moving image data [inputted through said moving image source input step]; and

[data changing step for] obtaining a digital moving image stream from the inputted digital moving image data [source input step] and [for] executing data change to a pixel of the digital moving image data designated by the control information in each predetermined image unit of the digital moving image stream.

Please ADD the following new claims 17-22:

17. (NEW) A moving image data controlling system comprising:

an encoder inputting and encoding moving image data and, separately, inputting and encoding control information indicating processing for the input moving image data, and integrating the encoded moving image data and the encoded control information; and

a decoder separating the encoded moving image data and the encoded control information, separately decoding the encoded moving image data and the encoded control information, and changing a moving image data stream obtained from the decoded moving

image data based upon the decoded control information.

18. (NEW) The moving image data controlling system according to claim 17, wherein the decoder comprises a data changing unit executing the changing of the moving image data stream obtained from the decoded moving image data.

19. (NEW) The moving image data controlling system according to claim 18, wherein the decoder further comprises an instructing unit providing instructions about changing the moving image data stream to the data changing unit.

20. (NEW) The moving image data controlling system according to claim 19, wherein the instructing unit comprises a graphical user interface comprising a dialog box displayed on a screen.

21. (NEW) The moving image data controlling system according to claim 18, wherein the decoder decodes the encoded control information into mask data input to the data changing unit.

22. (NEW) The moving image data controlling system according to claim 21, wherein the data changing unit receives the mask data and the decoded moving image data, applies a conversion to a pixel value designated by the mask data, and generates a mosaic in the moving image data.